

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner
 US Department of Commerce
 United States Patent and Trademark
 Office, PCT
 2011 South Clark Place Room
 CP2/5C24
 Arlington, VA 22202
 ETATS-UNIS D'AMERIQUE
 in its capacity as elected Office

Date of mailing (day/month/year) 29 March 2001 (29.03.01)	
International application No. PCT/US00/04709	Applicant's or agent's file reference CM-2140/VB
International filing date (day/month/year) 24 February 2000 (24.02.00)	Priority date (day/month/year) 28 February 1999 (28.02.99)
Applicant O'TOOLE, Edel et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:

08 January 2001 (08.01.01)

☐ in a notice effecting later election filed with the International Bureau on:2. The election ☐ was☒ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Beate Giffo-Schmitt Telephone No.: (41-22) 338.83.38
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(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
8 September 2000 (08.09.2000)

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(10) International Publication Number
WO 00/51545 A3

- (51) International Patent Classification⁷: **A61K 7/06**
- (21) International Application Number: **PCT/US00/04709**
- (22) International Filing Date: **24 February 2000 (24.02.2000)**
- (25) Filing Language: **English**
- (26) Publication Language: **English**
- (30) Priority Data:
9913764.8 28 February 1999 (28.02.1999) **GB**
- (71) Applicant (for all designated States except US): **THE PROCTER & GAMBLE COMPANY [US/US]**; One Procter & Gamble Plaza, Cincinnati, OH 45202 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **O'TOOLE, Edel [IE/GB]**; 8 Romana Court, Sidney Road, Staines, Middlesex TW18 4QJ (GB). **SCHOFIELD, Stephen, Robert [GB/GB]**; 1 Warwick, Crownwood, Bracknell, Berkshire RG12 0QP (GB). **MEREDITH, Paul [GB/GB]**; 154 Windsor Road, Chobham, Woking, Surrey GU24 8QX (GB). **GUMMER, Christopher, Lawrence [GB/GB]**; Highcroft, Dorking Road, Chilworth, Surrey GU4 8RR (GB).
- (74) Agents: **REED, T., David et al.**; The Procter & Gamble Company, 5299 Spring Grove Avenue, Cincinnati, OH 45217-1087 (US).
- (81) Designated States (national): **AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, FR, GB, GR, GU, HK, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW.**
- (84) Designated States (regional): **ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).**
- Published:**
— *With international search report.*
- (88) Date of publication of the international search report:
28 June 2001
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: **HAIR CARE COMPOSITIONS**

(57) Abstract: According to the present invention there is provided a hair care composition comprising at least one tyrosine compound and at least one other amino acid compound selected from tryptophan compounds, histidine compounds and lysine compounds. The compositions of the present invention can improve the strength and condition of the hair.

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 00/04709

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61K7/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
E	WO 00 51556 A (GUMMER CHRISTOPHER LAWRENCE ; MEREDITH PAUL (GB); TOOLE EDEL O (GB)) 8 September 2000 (2000-09-08) claims; examples ---	1-10
X	GB 987 800 A (SHISEIDO COMPAGY LIMITED) 31 March 1965 (1965-03-31) claims; examples 1,4,5 ---	1,2,5,6, 10
X	US 5 458 881 A (GACON PAUL ET AL) 17 October 1995 (1995-10-17) examples 6,7 ---	1,2,5-8, 10
X	WO 93 19725 A (HENKEL KGAA ; HOFFKES HORST (DE); MOELLER HINRICH (DE); BUETTNER R) 14 October 1993 (1993-10-14) claims --- -/--	1,5,6,10

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *8* document member of the same patent family

Date of the actual completion of the international search

8 January 2001

Date of mailing of the international search report

15/01/2001

Name and mailing address of the ISA

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INTERNATIONAL SEARCH REPORT

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 97 01323 A (SCHWARZKOPF GMBH HANS ;DEUTZ HERBERT (DE); AKRAM MUSTAFA (DE); KLE) 16 January 1997 (1997-01-16) page 2, paragraph 8 -page 3, paragraph 1 -----	1,5,6,10

INTERNATIONAL SEARCH REPORT

Information on patent family members

Inte. Application No

PCT/US 00/04709

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 0051556 A	08-09-2000	AU 3501400 A	21-09-2000
GB 987800 A		CH 406529 A	31-01-1966
		DE 1492121 A	14-05-1969
		FR 1382068 A	02-04-1965
US 5458881 A	17-10-1995	FR 2676922 A	04-12-1992
		AT 115851 T	15-01-1995
		CA 2110593 A	10-12-1992
		DE 69200959 D	02-02-1995
		DE 69200959 T	11-05-1995
		EP 0586501 A	16-03-1994
		ES 2065780 T	16-02-1995
		WO 9221318 A	10-12-1992
		JP 2705848 B	28-01-1998
		JP 7502010 T	02-03-1995
WO 9319725 A	14-10-1993	DE 4211450 A	07-10-1993
		AT 131720 T	15-01-1996
		DE 59301219 D	01-02-1996
		DK 634923 T	06-05-1996
		EP 0634923 A	25-01-1995
		ES 2081213 T	16-02-1996
		GR 3018809 T	30-04-1996
WO 9701323 A	16-01-1997	DE 19617490 A	13-11-1997
		AU 6223696 A	30-01-1997
		AU 6301396 A	30-01-1997
		DE 19617395 A	02-01-1997
		DE 19617515 A	02-01-1997
		WO 9701322 A	16-01-1997
		EP 0835093 A	15-04-1998
		JP 11508542 T	27-07-1999
		US 6129770 A	10-10-2000

REC'D 09 JUL 2001

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

14/

Applicant's or agent's file reference CM2140/VB	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US00/04709	International filing date (day/month/year) 24/02/2000	Priority date (day/month/year) 14/06/1999
International Patent Classification (IPC) or national classification and IPC A61K7/06		
Applicant THE PROCTER & GAMBLE COMPANY et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.


2. This REPORT consists of a total of 6 sheets, including this cover sheet.

- ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☒ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand 08/01/2001	Date of completion of this report 05.07.2001
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Klier, E Telephone No. +49 89 2399 8531



INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/US00/04709

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):
Description, pages:

1-50 as originally filed

Claims, No.:

1-10 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:
- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/US00/04709

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	7-9
	No:	Claims	1-6,10
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-10
Industrial applicability (IA)	Yes:	Claims	1-10
	No:	Claims	

2. Citations and explanations see separate sheet

VI. Certain documents cited

1. Certain published documents (Rule 70.10)

and / or

2. Non-written disclosures (Rule 70.9)

see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:
see separate sheet

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:
see separate sheet

Reasoned statement

Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following documents:

D1: GB-A-987800
D2: US-A-5458881
D3: WO-A-9319725
D4: WO-A-9701323

1. The subject-matter of claims 1 - 6 and 10 is not novel (Art. 33(2) EPC).
 - 1.1. D1 discloses stable hair care compositions comprising L-tyrosine, L-histidine and L-lysine and esters of amino acids (see examples 4, 5, 7; page 1, lines 22 - 28; claims). Thus, the subject-matter of independent claims 1 and 10 is known.
 - 1.2. D2 describes protein hydrolysates derived from cereal protein hydrolysates. These hydrolysates are further acetylated. Wheat protein contains the claimed amino acids (see column 2, lines 37 - 50; examples 1, 2, 6, 7; claim 13). These compositions are suitable as hair care compositions and are used in shampoos. Consequently, the subject-matter of independent claims 1 and 10 is not novel.
 - 1.3. Table V of D4 discloses a keratin hydrolysate as a care composition for hair. In addition, the description (on page 5, second but last paragraph) of the application gives the impression that also peptides comprising the amino acid compounds fall under the definition of the amino acid compound (such as tyrosine compound). The keratin hydrolysate should contain the claimed amino acid compounds. Thus, the subject-matter of the independent claims 1 and 10 is disclosed in D4.
 - 1.4. The subject-matter of dependent claims 2 - 6 is also known from the above cited documents.
 - 1.5. D3 does not disclose the combination of tyrosine with at least one other amino acid compound selected from tryptophan compounds, histidine compounds and

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

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lysine compounds. Therefore, the subject-matter of claims 1 - 10 is not disclosed in D3

2. The subject-matter of claims 1 - 10 does not comply with Art. 33(3) PCT.

D4 teaches that amino acid (derivatives) improve the strength and condition of the hair (see claims; page 2, third and fourth paragraphs). Preferred care compositions are tyrosine and lysine (see table 1).

A skilled person applies these compounds in hair care compositions.

The application does not contain any data that the combination of at least one tyrosine compound with at least one other amino acid compound selected from tryptophan compounds, histidine compounds and lysine compounds results in an unexpected effect.

Without any comparative data an inventive step cannot be acknowledged.

Alleged advantages should be supported by sufficient evidence where comparison is made with highly pertinent prior art.

In assessing the inventive step of a combination of features consideration must be given to a feature only if the applicant has provided evidence that it contributes either independently or in conjunction with one or more of the other features, to the solution of the problem set in the description.

Re Item VI

Certain documents cited

Certain published documents (Rule 70.10)

Application No Patent No	Publication date (day/month/year)	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)
WO-A-0051556 (D5)	08.09.00	24.02.00	28.02.99

Hair care compositions comprising four or more amino acid compounds selected from (iv) tyrosine compounds, (i) histidine compounds, (ii) lysine compounds, (v) tryptophan compounds, (iii); (vi)...are claimed . Only one selection is necessary to arrive at the subject-matter of claims 1, 4 - 6 and 10.

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EXAMINATION REPORT - SEPARATE SHEET**

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Re Item VII

Certain defects in the international application

Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents D1, D2, D3 and D5 is not mentioned in the description, nor are these documents identified therein.

Re Item VIII

Certain observations on the international application

The description refers to formula (i) to specify the meaning of tyrosine compounds. Every X_n wherein n is not 0 and X_m wherein m is not 1 cannot be regarded as a tyrosine.

The same argumentation applies to the definitions of "tryptophan", "histidine" and "lysine compounds". These definitions render the scope of protection unclear.